COLPOSCOPIC APPEARANCE OF THE CERVIX OF HPV-INFECTED AND HPV NON-INFECTED WOMEN.

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Background:
The colposcopic appearance of cervical lesions has typically been classified with relationship to underlying severity of cancer precursors. However, there is a lack of data about the visual characteristics of the cervix according to underlying HPV status.

Objective:
To explore the relationship between colposcopic appearance of the cervix and HPV infection using a web-based boundary marking and scoring software.

Methods:
939 digitized images, obtained after application of 5% acetic acid at enrollment into the ASCUS LSIL Triage Study (ALTS), were selected randomly after stratification according to HPV status. The worst diagnosis observed during the two-year follow-up was CIN3/cancer in 172 (18.3%) and CIN2 in 83 (8.8%) of them. The images were reviewed by 21 expert colposcopists using novel software (Boundary Marking Tool) accessed through the World Wide Web. Experts masked to HPV and study design were asked to draw a boundary around acetowhite lesions, scoring them using a scale similar to the modified Reid Index. Evaluations were collected and analyzed centrally. Both PCR and Hybrid Capture were used for all specimens.

Results:
Of 939 women evaluated, 222 (23.6%) had a negative HPV test, 115 (12.3%) had only non-oncogenic HPV, and 602 (64.1%) were infected with at least one oncogenic HPV type. There was a wide range as to number and size of acetowhite lesions. There was not a strong association between any aspect of HPV and the presence of lesions. This lack of strong association was seen for the evaluators as a group, and for individuals.

Conclusion:

There was a weak relationship between the presence, number, and types of HPV infecting the cervix and the presence and number of lesions. Our results suggest that current colposcopic criteria would need to be revised in order to increase correlation with HPV.

Word count: 290(Limit is 300 words excluding title and authors)